2. (Amended) A system for manufacture of flat panel displays according to claim 1 and wherein the first controlled environment is an airborne particle controlled environment having a first level of controlled airborne particulate contamination, and the second controlled environment is an airborne particle controlled environment having a second level of controlled airborne particulate contamination that is less than the first level of controlled airborne particulate contamination.

3. (Amended) A system for manufacture of flat panel displays according to claim 1 and wherein said plurality of optical inspection devices are operative in coordination with said plurality of manufacturing devices for inspecting said substrates prior to transfer thereof out of said second controlled airborne particle contamination environment.

4. (Amended) A system for manufacture of flat panel displays according to claim 1 and wherein at least some of said plurality of optical inspection devices comprise non-scanning sensors.

5. (Amended) A system for manufacture of flat panel displays according to claim 4 and wherein said plurality of optical inspection devices are operative to identify fabrication process defects occurring during production of flat panel display substrates.

7. (Amended) A system for manufacture of flat panel displays according to claim 1 and wherein each of said plurality of optical inspection devices includes at least one non-scanning sensor which views substantially all of the surface of said substrate.

9. (Amended) A system for manufacture of flat panel displays according to claim 1 and wherein each of said plurality of optical inspection devices comprises an illuminating array operative to provide various combinations of illumination.

21. (Amended) An inspection system according to claim 17 and also comprising a

spatially positionable stage to support the flat panel display substrate, wherein the stage spatially positions the substrate at various angles relative to the illumination subsystem.

24. (Amended) An inspection system according to claim 22 and wherein the optical array, the illumination subsystem and the stage are configured and arranged to additionally enable selectively viewing the flat panel display substrate such that a zero'th order of diffraction impinges on the non-scanning optical array.

25. (Amended) An inspection according to claim 22 and wherein the optical array the illumination subsystem and the stage are configured and arranged to additionally enable selective viewing of the flat panel display substrate such that substantially no orders of diffraction impinge on the non-scanning optical array.

27. (Amended) An inspection system according to claim 21 and also comprising an image analyzer receiving an output from said non-scanning optical array and being operative to detect process defects including at least one of: uneven deposition of coatings, uneven removal of coatings, rinse residues, chemical residues, incomplete exposure of a photo-resist deposited on the substrate, scratches, lines, and particles embedded in the substrate.

28. (Amended) An inspection system according to claim 17 and wherein said optical array views substantially all of a surface of said substrate.

29. (Amended) An inspection system according to claim 17 and wherein said optical array views only part of a surface of said substrate.

30. (Amended) An inspection system according to claim 17 and wherein said optical array acquires at least one image of said substrate for each of a plurality of different illuminations.

35. (Amended) An inspection system according to claim 17 and also comprising a light source and a reflector operative to provide concentrated light from the light source to at least part of said flat panel display substrate.

42. (Amended) An inspection system according to claim 17 and comprising an adjustable mounting assembly for selectable determining at least one of relative inclination, spatial separation and axial orientation of at least two of said optical array, said illumination subsystem and said substrate.

72. (Amended) Apparatus for optically inspecting the surface of an article according to claim 70, wherein the image analysis subsystem is operative to identify anomalies that are substantially at least as large as the resolution of the camera.

Respectfully submitted,

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2. (Amended) A system for manufacture of flat panel displays comprisingaccording to claim 1 and wherein the first controlled environment is an airborne particle controlled environment having a first level of controlled airborne particulate contamination, and the second controlled environment is an airborne particle controlled environment having a second level of controlled airborne particulate contamination that is less than the first level of controlled airborne particulate contamination.

3. (Amended) A system for manufacture of flat panel displays according to claim 1 or claim 2 and wherein said plurality of optical inspection devices are operative in coordination with said plurality of manufacturing devices for inspecting said substrates prior to transfer thereof out of said second controlled airborne particle contamination environment.

4. (Amended) A system for manufacture of flat panel displays according to either of the preceding claims 1 and wherein at least some of said plurality of optical inspection devices comprise non-scanning sensors.

5. (Amended) A system for manufacture of flat panel displays according to any of the preceding claims 4 and wherein said plurality of optical inspection devices are operative to identify fabrication process defects occurring during production of flat panel display substrates.

7. (Amended) A system for manufacture of flat panel displays according to any of the preceding claims 1 and wherein each of said plurality of optical inspection devices includes at least one non-scanning sensor which views substantially all of the surface of said substrate.

9. (Amended) A system for manufacture of flat panel displays according to any of the preceding claims 1 and wherein each of said plurality of optical inspection devices comprises an illuminating array operative to provide various combinations of illumination.

21. (Amended) An inspection system according to any of claims 17 - 20 and also comprising a spatially positionable stage to support the flat panel display substrate, wherein the stage

spatially positions the substrate at various angles relative to the illumination subsystem.

24. (Amended) An inspection system according to either of claims 22 and 23 and wherein the optical array, the illumination subsystem and the stage are configured and arranged to additionally enable selectively viewing the flat panel display substrate such that a zero'th order of diffraction impinges on the non-scanning optical array.

25. (Amended) An inspection according to any of claims 22 - 24 and wherein the optical array the illumination subsystem and the stage are configured and arranged to additionally enable selective viewing of the flat panel display substrate such that substantially no orders of diffraction impinge on the non-scanning optical array.

27. (Amended) An inspection system according to any of claims 21-26 21 and also comprising an image analyzer receiving an output from said non-scanning optical array and being operative to detect process defects including at least one of: uneven deposition of coatings, uneven removal of coatings, rinse residues, chemical residues, incomplete exposure of a photo-resist deposited on the substrate, scratches, lines, and particles embedded in the substrate.

28. (Amended) An inspection system according to any of claims 17 - 18 and wherein said optical array views substantially all of a surface of said substrate.

29. (Amended) An inspection system according to any of claims 17 - 18 and wherein said optical array views only part of a surface of said substrate.

30. (Amended) An inspection system according to any of claims 17 - 29 and wherein said optical array acquires at least one image of said substrate for each of a plurality of different illuminations.

35. (Amended) An inspection system according to any of claims 17 - 21 and also comprising a light source and a reflector operative to provide concentrated light from the light source to at least part of said flat panel display substrate.

42. (Amended) An inspection system according to any of claims 17 - 41 and comprising an adjustable mounting assembly for selectable determining at least one of relative inclination, spatial separation and axial orientation of at least two of said optical array, said illumination subsystem and said substrate.

72. (Amended) Apparatus for optically inspecting the surface of an article according to any of claims 70 - 37, wherein the image analysis subsystem is operative to identify anomalies that are substantially at least as large as the resolution of the camera.